IN THE CLAIMS

Please amend the claims as follows:

Claims 1-62 (Canceled)

Claim 63 (Currently Amended): A semiconductor distributed Bragg reflector comprising:

an alternate stacking of first and second semiconductor layers having respective, different refractive indices; and

a plurality of intermediate layers each sandwiched between a first semiconductor layer and a second semiconductor layer, said intermediate layer having a refractive index intermediate between said refractive indices of said first and second semiconductor layers,

an intermediate layer provided in a region of said semiconductor distributed Bragg reflector having a thickness different from an intermediate layer provided in a different region of said semiconductor distributed Bragg reflector,

wherein said intermediate layers have different thickness and different doping concentrations within said semiconductor distributed Bragg reflector, said thickness and doping concentration being set in correspondence to electric field strength of light within said semiconductor distributed Bragg reflector.

Claim 64 (Original): The semiconductor distributed Bragg reflector as claimed in claim 63, wherein a difference of bandgap between said first and second semiconductor layers is set smaller in a region of said semiconductor distributed Bragg reflector where said intermediate layer has an increased thickness than in a region of said distributed Bragg reflector where said intermediate layer has a reduced thickness.

Claim 65 (Canceled).

Claim 66 (Currently Amended): The semiconductor distributed Bragg reflector as claimed in claim ~~65~~63, wherein said intermediate layer has an increased thickness and reduced impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is large, and wherein said intermediate layer is formed to have a reduced thickness and increased impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is small.

Claim 67 (Original): The semiconductor distributed Bragg reflector as claimed in claim 63, wherein said semiconductor distributed Bragg reflector has a design reflection wavelength of 1.1 :m or longer.

Claim 68 (Currently Amended): A surface-emission laser diode having a semiconductor distributed Bragg reflector, said semiconductor distributed Bragg reflector comprising:

an alternate stacking of first and second semiconductor layers having respective, different refractive indices; and

a plurality of intermediate layers each sandwiched between a first semiconductor layer and a second semiconductor layer, said intermediate layer having a refractive index intermediate between said refractive indices of said first and second semiconductor layers,

an intermediate layer provided in a region of said semiconductor distributed Bragg reflector having a thickness different from an intermediate layer provided in a different region of said semiconductor distributed Bragg reflector,

wherein said intermediate layers have different thickness and different doping concentrations within said semiconductor distributed Bragg reflector, said thickness and doping concentration being set in correspondence to electric field strength of light within said semiconductor distributed Bragg reflector.

Claim 69 (Original): The surface-emission laser diode as claimed in claim 68, wherein a difference of bandgap between said first and second semiconductor layers is set smaller in a region of said semiconductor distributed Bragg reflector where said intermediate layer has an increased thickness than in a region of said distributed Bragg reflector where said intermediate layer has a reduced thickness.

Claim 70 (Canceled).

Claim 71 (Original): The surface-emission laser diode as claimed in claim 68, wherein said intermediate layer has an increased thickness and reduced impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is large, and wherein said intermediate layer is formed to have a reduced thickness and increased impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is small.

Claim 72 (Original): The surface-emission laser diode as claimed in claim 68, wherein said semiconductor distributed Bragg reflector has a design reflection wavelength of 1.1 :m or longer.

Claim 73 (Currently Amended): The surface-emission laser diode as claimed in claim 68, wherein said surface-emission laser diode has an active layer ~~contains~~ containing a group III element of any or all of Ga and In and a group V element of any or all of As, N and Sb.

Claim 74 (Currently Amended): A surface-emission laser array including a plurality of surface-emission laser diodes each having a semiconductor distributed Bragg reflector,

said semiconductor distributed Bragg reflector comprising:

an alternate stacking of first and second semiconductor layers having respective, different refractive indices; and

a plurality of intermediate layers each sandwiched between a first semiconductor layer and a second semiconductor layer, said intermediate layer having a refractive index intermediate between said refractive indices of said first and second semiconductor layers,

an intermediate layer provided in a region of said semiconductor distributed Bragg reflector having a thickness different from an intermediate layer provided in a different region of said semiconductor distributed Bragg reflector,

wherein said intermediate layers have different thickness and different doping concentrations within said semiconductor distributed Bragg reflector, said thickness and doping concentration being set in correspondence to electric field strength of light within said semiconductor distributed Bragg reflector.

Claim 75 (Original): The surface-emission laser array as claimed in claim 74, wherein a difference of bandgap between said first and second semiconductor layers is set smaller in a region of said semiconductor distributed Bragg reflector where said intermediate layer has an increased thickness than in a region of said distributed Bragg reflector where said intermediate layer has a reduced thickness.

Claim 76 (Canceled).

Claim 77 (Currently Amended): The semiconductor distributed Bragg reflector as claimed in claim ~~76~~ 74 , wherein said intermediate layer has an increased thickness and reduced impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is large, and wherein said intermediate layer is formed to have a reduced thickness and increased impurity doping concentration in a region of said semiconductor distributed Bragg reflector where the electric field strength of light is small.

Claim 78 (Original): The surface-emission laser array as claimed in claim 74, wherein said semiconductor distributed Bragg reflector has a design reflection wavelength of 1.1 :m or longer.

Claims 79-125 (Canceled).